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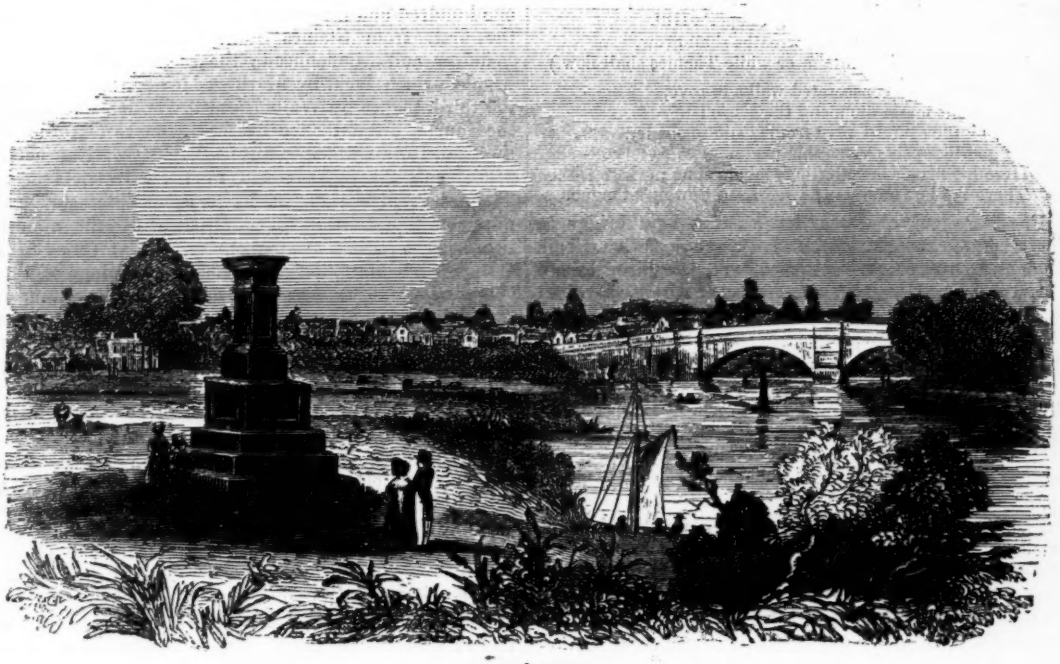
THE BANKS OF THE THAMES. VI.



STAINES' STONE.

We now approach that part of the Thames at which it receives the waters of the river Colne, about two miles above the town of Staines. This river rises in Hertfordshire, not far from St. Albans, and after passing by Watford, becomes the boundary between the counties of Middlesex and Buckingham; continuing its course through Uxbridge to the Thames.

The Thames then flows between Egham and Staines, the former being on the Surrey and the latter on the Middlesex side; Egham is a large village, in the north-west corner of the county of Surrey. It consists of one street, nearly a mile in length. The church, apparently of considerable antiquity, has externally but a mean appearance: it is built of stone, with a modern mixture of brick, and is covered with a white stucco. On the north side of the street is a range of alms-houses, founded in 1706, by Mr. Henry Strode, merchant of London, for six men and six women, who must be sixty years of age, and have been parishioners of Egham twenty years without receiving any parochial relief. The centre of this building, which exhibits an appearance of neatness and comfort, is the residence of a schoolmaster, who has a salary for educating twenty poor boys of Egham. This village furnishes a remarkable instance of the effect which changes in the modes of travelling will often effect in the prosperity of particular places. A topographical writer, in describing Egham as it was a few years ago, says:—"This place has many respectable inns, and seems to be in a thriving state, the principal source of its prosperity being derived from its situation as a great thoroughfare from the metropolis to the west and south of the kingdom." This account is no longer true. The communication by railway from London to the south-western parts of England has removed almost the entire stage coach trade from Egham, and caused the closing of many of the inns.

Northward of Egham, between it and the Thames, is Runnymead, which will ever be celebrated in the history of this country as the spot where the assembled barons, in 1215, compelled King John, who had in vain resorted to the most criminal prevarications, to grant what is emphatically denominated *Magna Charta*, the Great Charter of the liberties of England. Here his assent was extorted; but the treaty is said to have been actually signed on an island in the Thames still called Charter Island, and included in the parish called Wraggsbury, in Buckinghamshire. It was suggested some years ago, that a pillar should be erected on this spot, to commemorate an event which has had so marked an effect in the English character and constitution; but we believe that nothing of the kind has been put in execution.

Westward of Egham is an elevation called Cooper's Hill, which has acquired a certain degree of celebrity from a poem of the same name by Sir John Denham. This poem was written about two centuries ago, and appears to be a description of objects seen from the hill, rather than of the hill itself. Cooper's Hill, the professed subject of the poem, is not mentioned by name; neither is any account given of its situation, produce, or history; but, as has been ingeniously observed, it serves, like the stand of a telescope, merely as a convenience for viewing other objects. Dr. Johnson, speaking of this poem, said:—

Cooper's Hill is the work that confers upon Denham the rank and dignity of an original author. He seems to have

been, at least among us, the author of a species of composition that may be termed local poetry, of which the fundamental subject is some particular landscape, to be poetically described, with the addition of such embellishments as may be supplied by historical retrospection, or incidental meditation. To trace a new species of poetry, has in itself a very high claim to praise; and its praise is yet more, when it is apparently copied by Garth and Pope.

The associations connected with this spot are rendered perennial by the lines of Pope:—

Bear me, oh! bear me to sequestered scenes,
To bow'ry mazes and surrounding greens;
To Thames's bank, which fragrant breezes fill,
Or where the Muses sport on Cooper's Hill.
(On Cooper's Hill eternal wreaths shall grow,
While lasts the mountain, or while Thames shall flow.)

I seem through consecrated walks to rove,
I hear soft music die along the grove:
Led by the sound I rove from shade to shade,
By god-like poets venerable made.
Here his first lays majestic Denham sung;
There the last numbers flowed from Cowley's tongue.

From Egham we cross the Thames by a bridge to the town of Staines. Staines Bridge is a handsome stone structure, erected in lieu of an earlier iron bridge with a single arch, which was not deemed safe. Staines is a market town, with about two thousand inhabitants. It has been much improved of late years, and consists principally of one wide street, containing some good houses, and terminating at the foot of the bridge. The church, dedicated to St. Mary, and originally erected in 1631 by Inigo Jones, has been recently rebuilt; it is a neat structure, with a square embattled tower; the interior, which is well arranged and handsomely fitted up, contains about three hundred and fifty free sittings.

Staines, or Stanes, as it was formerly called, is supposed to have derived its name from the Saxon word *stana* or stone, because, within its parochial limits, the stone has immemorially stood, which marks the extent of the city of London's western jurisdiction on the Thames. It stands on the banks of the river, at Colneditch, at a small distance from the church. On the upper part of the stone, which is much decayed, is inscribed, "God preserve the city of London, A.D. 1280." This stone was, during the mayoralty of Sir Watkin Lewes, in the year 1781, placed on a new pedestal, whose inscription informs the reader that it was erected exactly over the spot where the old one formerly stood.

This stone marks a boundary, beyond which the conservancy of the Thames passes into other hands; and we take the present opportunity to offer a few explanatory remarks on this subject. There is a homely proverb, that "every body's business is nobody's business;" the truth of which would be soon shown if such a river as the Thames were left without definite arrangements being made for its conservancy. Before the year 1771, the navigation of the river was very imperfect. It was carried on in large barges of two hundred tons burden, drawing four feet water, passing downward by the force of the stream, and upwards by the tractive force of men or horses, walking on the banks. In some cases the barge was pulled along by twelve or fourteen horses, or by a gang of men varying from fifty to eighty. But in the year which we have mentioned, an act of parliament was passed for improving the navigation from the metropolis to Cricklade; and soon afterwards another act vested the jurisdiction of that part of the river between London and Staines in the corporation of the city of London, which has in consequence made considerable improvements, by the construction of towing-paths, locks, and other works. The jurisdiction of the corporation extends from Staines to the Crow-stone, near Southend, including part of the rivers Medway and Lea. It is the office of the lord mayor's deputy, the water-bailiff, to search for, and punish, all persons who infringe the laws made for the preservation of the river, and its fish; and in order to maintain the rights and privileges of the river, the lord mayor holds a court of conservancy eight times in the year, in the four counties of Middlesex, Surrey, Kent, and Essex.

With regard to the portion of the Thames above Staines, we shall avail ourselves of a pamphlet published a few years ago by Mr. Allunt of Henley. Whether any changes have occurred since then, we do not know; but we shall give the substance of the statement made by him. The upper portion of the Thames, extending from Staines to Lechlade in Gloucestershire, a distance of one hundred and nine miles, is divided into five districts; the first, from Staines Stone, to Boulter's lock, by Windsor and Maidenhead; the second, from thence to Mapledurham lock, by Marlow, Henley, and Reading; the third, thence by Wallingford to Shillingford bridge; the fourth, from thence by Abingdon to Oxford; and the fifth, from Oxford to Lechlade. By various acts of parliament, the management of these districts of the Thames is placed in the hands of disinterested commissioners, consisting of gentlemen of the counties bordering on the river, possessing 100*l.* a year real, or 3000*l.* personal estate. Six general meetings of these commissioners are annually held, at London, Windsor, Marlow, Reading, Wallingford, and Oxford. Empowered to raise by loans the sum of seventy-five thousand pounds, at an interest of five per cent., they have expended that and the annual surplus of the tolls, in making several pound-locks, mostly a hundred and twenty feet in length, by eighteen in width; and also in short side-cuts, situated in places where the river was formerly penned up for the purpose of working mills, or for fishing. Considerable sums have also been expended in making a convenient horse-towing path along the whole navigation, in ballasting the channel where necessary, and in other improvements, by which vessels are enabled to navigate without obstruction at the depth of three feet ten inches in all seasons. By these improvements and the judicious regulations adopted by the commissioners, the navigation was rendered to a certain degree safe and expeditious. The supply of water is generally abundant, from the many tributary streams flowing into the Thames. Barges usually go down the river at the rate of from twenty-five to thirty-five miles a day; and up from twenty to thirty miles. The tolls are three-pence per ton at each pound lock, or six shillings and nine-pence per ton for two hundred and eighteen miles; besides a toll of about two shillings per ton throughout to the weir-owners. The trade in the Thames has been sufficient to yield a sum large enough to keep the works in repair, and to permit a considerable amount to be expended in new works. This account was given before the age of railroads commenced; it is probable that many modifications have been produced in the amount of traffic along the upper course of the Thames.

We now leave Staines, and proceed in our tour down the river. Not far from this town, St. Ann's hill appears in a very conspicuous and elevated situation, offering a picturesque object at various bends of the river. Laleham soon appears in sight; a spot famed for the entertainment it affords to the lovers of angling. The river at Laleham narrows considerably, and about the shallows the water is beautifully transparent. Here the tranquillity of the scenery, the various objects perpetually gliding on the stream, and groups of cattle from the adjacent meadows drinking at the river, all contribute to form a picturesque assemblage.

From Laleham, the river proceeds in a course nearly due south, for a distance of about three miles, to Chertsey, a pretty market-town on the Surrey side of the river. Chertsey formerly derived consequence from its abbey, which ranked among the more considerable monastic institutions of the country; and possessed

annual revenues valued at the time of the dissolution at about seven hundred pounds. Some of the outer walls are the only remains of this once celebrated edifice. On the site of the abbey, (which once contained the body of Henry the Sixth,) Sir Henry Carew, master of the buck-hounds to Charles the Second, built a handsome mansion, called the Abbey-house. Across the Thames at Chertsey is a bridge of seven arches, built of Purbeck stone, at an expense of about thirteen thousand pounds.

The poet Cowley resided in Chertsey some time, and died in what was called the Porch-house. He retired to this quiet spot from disgust, wearied out with the vexatious attendance upon a court, and the fatigues of business. In this retreat he vainly flattered himself with meeting uninterrupted harmony; but the following letter, written by him to Dr. Spratt soon after his arrival at his new abode, speaks of a mind by no means satisfied and at ease.

Chertsey, May 21, 1665.

The first night that I came hither I caught so great a cold, with a defluxion of rheum, as made me keep my chamber ten days. And, two days after, had such a bruise on my ribs with a fall, that I am yet unable to move or turn myself in my bed. This is my personal fortune here to begin with. And, besides, I can get no money from my tenants, and have my meadows eaten up every night by cattle put in by my neighbours. What this signifies, or may come to in time, God knows; if it be ominous, it can end in nothing less than hanging. Another misfortune has been, and stranger than all the rest, that you have broke your word with me, and failed to come.

But we must now leave Cowley and his troubles; and will, in the next paper, proceed on our tour from the town of Chertsey eastward.

GARDEN HERBS.

Basil.

According to fabulous history this plant originated from the death of Ocimus, who first ordained the combats in honour of Pallas, and being killed by Cyclodemas, a famous gladiator, was immediately metamorphosed into the plant which bears his name.

The Greeks called this plant ωχιμον on account of quickness with which the seed germinates. In modern botany the term Ocymum is applied to a genus of labiate plants remarkable for the fragrance of their leaves which are used as an ingredient in savoury dishes, for which reason some of the species have been, from time immemorial, very generally cultivated. They are known in our gardens as *basils*, the name *basilium*, (from the Greek word for *a king*,) having been applied to common basil by the monkish writers on plants in allusion to its regal qualities.

Basil is a native of the south of Europe, as well as the East Indies and some parts of Africa: it also grows wild in Persia. There are many varieties, of which Gerard enumerates several. He says:—

Great garden basil is of two sorts, differing from one another in bigness. The first hath broad, thick and fat leaves, of a pleasant sweet smell, and of which some are here and there of a blackish red colour, somewhat snipped about the edges, not unlike the leaves of French mercury. The stalk groweth to the height of half a cubit, dividing itself into divers branches, whereupon do stand small and base flowers, sometimes whitish, and often tending to dark purple. The root is thready, and drieth at the approach of winter.

Citron basil is very like unto the former, but is altogether lesser. The whole plant is of a most odoriferous smell, not unlike the smell of a lemon or citron, whereof it took his surname.

Bush basil is a low and base plant, having a thready root from which rise up many small and tender stalks, branched into divers arms or boughs, whereupon are placed many little leaves, lesser than those of pennyroyal. The whole plant is of a most pleasing sweet smell.

Indian basil sends up a stalk a foot or more high, four-square, and of a purple colour, set at each joint with two leaves, and out of their bosoms come little branches: the largest leaves are some two inches broad, and some three long, growing upon long stalks, and deeply cut in about the edges, being also thick, fat and juicy, and either of a dark purple colour, or else spotted with more or less such coloured spots. The tops of the branches end in spokie turts of white flowers, with purple veins running alongst them. The seed is round, black and large. The plant perishes every year as soon as it hath perfected the seed.

This harmless and fragrant herb was the object of many superstitious prejudices among the ancients, and of much fierce debate among the old herbalists. The ancients were of opinion that if basil were pounded and put under a stone, it would breed serpents. Instead of putting this marvellous quality to the test, they continued to decry the use of the herb; and when it was transplanted into this country, our herbalists finding the climate too cold for serpents, transformed them into worms and maggots, which, as it is gravely stated, this herb will engender if it be only chewed and put into the sun.

Chrysippus, two hundred years B.C., condemned basil as being hurtful to the stomach, an enemy to the sight, and a robber of the wits. Diodorus stated, that by eating this herb, cutaneous insects are produced. Hollerus relates, that an Italian by frequently smelling this herb, bred a scorpion in his brain. According to Galen, "basil is hot in the second degree; but it hath adjoined with it a superfluous moisture, by reason whereof it should not be taken inwardly, but being applied outwardly, it is good to digest or distribute, and to concoct." Galen says further, that basil was eaten by many persons in his time, being corrected with oil and vinegar.

Gerard recommends the juice of basil to be drunk in wine of Chios, or strong sack, as a remedy for the headache. "Mixed with fine meal of parched barley, oil of roses, and vinegar, it is good against inflammations and the sting of venomous beasts. They of Africa do affirm that they who are stung of the scorpion, and have eaten of it, shall feel no pain at all."

Basil leaves a pleasant smell when rubbed with the hand; and it was formerly said that the hand of a fair lady made it thrive. Farmers in the times of Queen Mary and Queen Elizabeth planted it in pots to offer to their landladies or others who visited the farm. Tusser says:—

> Fine Basil desireth it may be hir lot
> To grow as a gilleflower, trim in a pot:
> That ladies and gentiles, for whom you do serve,
> May help her as needeth, poore life to preserve.

In our gardens basil is treated as a tender annual. It is raised in the spring in a hot-bed, and turned into a warm border when the summer is so far advanced that frosty nights are no longer to be feared. A slight frost would be instantly fatal to this plant.

The history of basil may be thus briefly summed up. *First*:—The ancients regarded it as a most viruulent and dangerous plant. *Secondly*,—The old herbalists were divided in opinion. Culpeper says:—"Away to Dr. Reason went I, who told me that bazil was an herb of Mars, and under the Scorpion, and perhaps, therefore, called basilicon, and it is no marvel if it carry a kind of virulent quality with it." Gerard agrees with Simeon Zethy that, "the smell of this plant is good for the heart and for the head: that the seed cureth the infirmities of the heart, taketh away sorrowfulness which cometh of melancholy, and maketh a man merry and glad." *Thirdly*,—Modern botanists regard basil as a simple garden herb, useful to impart flavour to soups and sauces.

Borage.

The common borage is often taken as the type of Borragineæ, the Borage family, a natural order of Dicotyledo-

nous plants, containing about thirty genera, and nearly three hundred species. This herb represents not only the peculiarities of structure, but sensible properties of this order: all the known species have an insipid juice, and their surface is covered with stiff, white hairs, which impart a peculiar roughness or asperity to the skin, on which account these plants were formerly called *asperifoliæ*, or rough-leaved.

Borage is said to be derived from the Latin words, *cor* and *ago*, because the old herbalists used it "to comfort the *heart* and spirits of those that are in a consumption or troubled with often swoonings, or passions of the *heart*." The ancient Romans called it *Buglossus*, from the Greek Βουγλωσσος, because the leaf is like the tongue of an ox. The French call it *langue de bœuf*, and the name Bugloss is not uncommon in England. *Euphrosynon* is also an ancient name for it, because when put into a cup of wine it was said to make those who drank of it merry,—an effect which we should be disposed to attribute rather to the wine than the borage.

Borage is said to have been introduced into England from Aleppo, but it grows so freely in this country that many writers suppose it to be indigenous. The herb is succulent and mucilaginous, and when bruised yields a very faint odour. Exhilarating qualities were formerly attaibuted to it, and it was reckoned one of the four cordial flowers, the other three being alkanet, roses, and violets. It has been recommended as a medicine of great efficacy in pleurisy and inflammatory fever, and as such is sometimes used in France in the form of a syrup prepared from the leaves. The juice of borage yields nitre, and on this account perhaps its medicinal virtues are considered salutary. Water distilled from both the leaves and flowers of the plant was formerly a favourite medicine, but is very little regarded in modern practice. Gerard says that many things can be made from borage, "and be used everywhere for the comfort of the heart, for the driving away of sorrowe and increasing the joie of the mind. Sirrupe made of the flowers comforteth the heart, purgeth melancholie, quieteth the phrenticke or lunaticke person. The leaves eaten raw do engender goode bloode, and when boiled in honey and water they cure hoarseness."

Lord Bacon observes that—

The leaf of the borage hath an excellent spirit to repress the fuliginous vapour of dusky melancholy, and so to cure madness: but nevertheless, if the leaf be infused long it yieldeth forth but a raw substance, of no virtue; but if the borage stay a small time, and be often changed with fresh, it will make a sovereign drink for melancholy passions.

There is an old Latin verse on this plant—

Ego borago gaudia semper ago—

which has been thus paraphrased:—

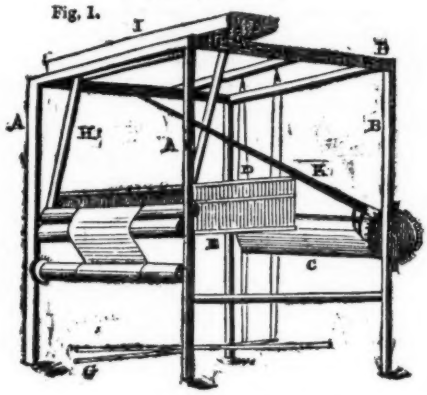
I, Borage, bring courage.

This herb is now almost entirely neglected in England, although it is sometimes used with wine, water, lemon, and sugar as an ingredient in the favourite old English drink called "cool tankard." The plant has an odour like cucumber, and, in consequence of the nitre contained in it, communicates a peculiar coolness and flavour to any beverage in which it is steeped.

He who from out the dull dark earth
Can bid the red rose take its birth,
And from the blind unopened mine
Call forth the gem to live and shine,
He, by some powerful, heavenly law,
Will from our dark condition draw
Enjoyment endless, lovely light,
And give us courage for the fight,
Give strength through every ill to spring,
And hope, which conquers everything.—J

WIRE-GAUZE.

Fig. 1.



In our recent papers on Wire-drawing we briefly explained the mode in which a bar of iron or other metal is gradually reduced in diameter, till the form of wire is produced. We now proceed to show how wire, thus produced, may be made into a net, a cloth, a gauze, or extended material consisting of meshes.

This kind of manufacture assumes one of two forms, according to circumstances. If a fence, grating, or net be required, in which the meshes are as much as an inch in diameter, or are otherwise than rectangular in shape, the wire is twisted or plaited into the required form by hand; but if the meshes are smaller in size, the process is effected by means of a loom, in many respects resembling the cloth-weaver's hand-loom.

In the annexed cut (fig. 1,) ABBA represents the frame of the loom, by which all the parts are held together, and which is generally about five feet high, four feet deep, and three wide, but occasionally much larger. C is a beam or wooden roller, on the surface of which has been turned a number of deep grooves, into which the wires to form the "warp" are wound, each groove receiving a greater or less number of wires, according to the required fineness of the wire-cloth or gauze. These wires pass through vertical openings in a kind of frame-work, D E, and then pass over a roller in front of the frame. As the cloth becomes woven it is wound on another roller situated beneath the one just referred to. The apparatus at D E consists of two sets, or four frames of vertical wires, each about as thick as a common knitting-pin, and in the middle of each of these wires a small hole is punched, through which one wire of the warp is passed. Thus each wire of the warp has a separate perforation appropriated to itself. These frames are suspended, two and two together, by cords passing over the top of the loom, or else round pulleys fixed to an upper beam. F G are two treadles, by which the weaver draws down the frames alternately, during the process of weaving.

The warp-wires being thus arranged in a parallel horizontal layer from the beam to the front roller, it is evident that, by pressing down the treadles alternately, the warp-wires in the loop-holes of the frames D E will be alternately elevated and depressed, so as to form a passage, under some of the wires and above others, for a shuttle containing a bobbin of wire. As the shuttle passes in this way across the warp, it leaves one thread of "weft" behind it, which is immediately driven up close to the weft-thread immediately preceding it, by an instrument called the *reed*, which swings on the lower part of the lever H. The warp-wires being reversed in position by the action of the treadles, the layer, row, or set of wires, which was before elevated, is now depressed, and the depressed wires elevated, and another weft-thread is similarly thrown across is the shuttle, and driven up by means of the reed.

The instrument last spoken of, *i. e.* the reed, is com-

posed of small bars of steel wire, set as close as possible, so as only just to admit the warp-wires between them, and the swing-frame H, to which it is attached, is balanced and aided in its oscillations by a heavy movable piece of timber I, resting on pivots on the upper part of the frame.

As the work advances the woven cloth is wound on the lower front roller or beam by moving the beam C round a little, by means of a ratchet wheel at one end, and the connecting lever K. Thus the weaving proceeds, thread after thread of weft being thrown across the warp, the two sets of warp-wires being alternately elevated and depressed.

The shuttles are of two kinds, according to the thickness of the wire employed. In general, the form is that represented at A in the annexed cut (fig. 2,) differing

Fig. 2.

but little from the linen-weaver's shuttle, as formerly used. It is a kind of thick blunt needle, similar at both ends, and made of box-wood. It is about six inches in length, and has an aperture in the middle for the insertion of a bobbin or pirn. This bobbin is a little cylinder rotating on its axis by means of pivots at the ends, and the wire being wound on the bobbin, the rotation causes it to be given off as wanted by the weaver. When the wire is very thick it does not leave the bobbin with sufficient ease and celerity, and in that case it is wound on a kind of notched stick, represented at B, and then driven across the warp-threads.

Power-loom weaving has been applied to wire-cloth, as well as to fibrous materials, such as linen, cotton, and woollen, but the demand is not sufficiently extensive to render this application of steam power of high importance.

The reader will readily call to mind the many purposes for which twisted wire is applied, under the general name of "wire-work." Of those kinds which are woven, the coarser specimens are used for fences, pheasantries, lanterns, &c., and the finer for flour-dressing machines, paper-mill washers, fine sieves, meat-safes, dish-covers, window-blinds, and a variety of other purposes.

When the meshes are very minute, the fabric is termed *wire gauze*,—a substance which has become interesting since the curious discovery of Sir H. Davy, that such gauze is incapable of permitting the passage of flame.

The experiment may be performed with a piece of wire-gauze, about nine inches square, and of such fineness as to contain about thirty meshes in the square inch. If we bring the gauze gradually down upon the flame of a candle, or of a spirit-lamp, an appearance will be presented as shown in fig. 3. The flame does not pass through the gauze, but only the hot inflammable vapour of the flame, which may be ignited at the upper surface, as shown in fig. 4.

If two pieces of paper be attached, one to each surface of the gauze, and flame be applied below, the under piece will of course be consumed; but the upper piece will remain uninjured by the flame, so long as the wire-gauze remains below red-heat. If, instead of paper, we place camphor on the upper surface of the gauze, the camphor will not take fire there; but having melted, will pass through the gauze, and burn on the under surface only. If gunpowder be sprinkled on the gauze, it will not ignite until the wire is hot enough for the purpose, When Lycopodium is projected on flame it instantly breaks out into a blaze; but if this substance be projected on the wire-gauze, it merely blackens, and does not take fire at all.

We see, then, from these experiments, that wire-gauze is a barrier to the progress of combustion, and that it intercepts heat as well as flame. If we place a piece of cotton-stuff upon the gauze, and bring the latter down upon a flame, the cotton will remain uninjured until the wire gets red-hot:—the flame will then pass through and consume the stuff. We see then that wire-gauze ceases to intercept flame as soon as by increase of temperature it ceases to intercept heat.

Fig. 3.

Fig. 4.

Fig. 5.

Now since the wire-gauze is formed of a good conducting substance, so much heat is abstracted from the flame, that the vapour which passes through the meshes is not hot enough to appear as flame; but when the gauze is red-hot, sufficient heat passes through to kindle the vapour, and then the flame is both below and above the gauze; in which case the latter only bisects the flame as in fig. 4.

The remarkable property of wire-gauze, was applied by Sir H. Davy to the construction of the miner's safety lamp. Coal-mines are frequently infested with an inflammable compound of hydrogen and carbon called carburetted hydrogen, or by the miners, *fire-damp*. This gas by mingling with the atmospheric air becomes explosive; so that the means whereby the miner dispelled the darkness of his gloomy workshop often produced his destruction. To remedy the frequent disasters thus occasioned, Sir H. Davy invented a lamp, the flame of which is entirely surrounded by a hollow cylinder of wire-gauze A, (fig 5,) with a double top, carefully fastened, by doubling over, to the brass rim B, which screws on to the lamp C. The whole is protected and rendered portable by the frame and ring D. It is obvious that the flame of the lamp cannot penetrate from within to the surrounding medium, in consequence of the cooling power of the metallic tissue.

Another humane application of wire-gauze was made by the Chevalier Aldini, who applied this substance, together with other badly conducting materials, as a protection against fire. The incombustible parts of dress for covering the body, arms, and legs, he formed out of strong cloth, previously steeped in an alum solution; and the parts intended for the head were made of asbestos. The head-dress was a large cap entirely covering the head down to the neck, with proper apertures for the eyes, nostrils, and mouth. To this dress was superadded a wire-gauze dress consisting of a cap, a cuirass, a covering for the body and thighs; a pair of boots of double wire-gauze, and a shield.

Numerous experiments were made to show the efficacy of these defences in resisting flame. Among many others we may mention those exhibited to a committee of the Academy of Sciences at Paris. Two parallel rows of straw and brushwood, supported by iron frames, were placed three feet apart and extended thirty feet in length

When this mass was ignited, the spectators were obliged to move to a distance of nine or ten yards to avoid the heat. The flames appeared to fill up the whole space between the rows, and rose to the height of about ten feet. When the flames were most fierce, six firemen, clad in the incombustible dresses, marched many times at a slow pace along the fiery passage. One of the men carried behind him a child eight years old in a wicker basket covered with metallic gauze.

A still more striking exhibition was made in 1829 in the yard of the barracks of Saint Gervais. Two towers were erected, each two stories high, and were surrounded with faggots and straw, and ignited. The firemen entered the towers with impunity, and one of them with his child in the wire-gauze basket rushed into the flames which were raging to the height of eight yards. This violent combustion, accompanied by a thick black smoke, hid him from the view of the spectators, and he remained so long invisible that serious apprehensions were felt for his safety; but he at length appeared, uninjured, and exulting in having braved the terrors of this fiery gulf.

It is remarkable that, in these trials, the firemen were able to breathe in the midst of the flames without difficulty. This effect arises from the circumstance that much of the heat is intercepted by the wire-gauze in the passage of the heated air to the lungs; and also from the remarkable power of the human body to resist great heat, and of the lungs to breathe very hot air.

LIKE some vast flood, unbounded, fierce, and strong,
His nature leads ungoverned man along,
Like mighty bulwarks made to stem that tide,
The laws are formed, and placed on every side;
Whene'er it breaks the bonds by these decreed,
New statutes rise, and stronger laws succeed;
More and more gentle grows the dying stream,
More and more strong the rising bulwarks seem;
Till, like a miner working sure and slow,
Luxury creeps on, and ruins all below!
The basis sinks, the ample piles decay,
The stately fabric shakes and falls away;
Primeval want and ignorance come on,
But Freedom, that exalts the savage state, is gone.—
CRABBE.

PRINTING was invented by a soldier, gunpowder by a monk, and several branches of the clothing trade by a bishop; this last is said, however, agreeably to the vulgar notions concerning Bishop Blaze, the patron saint of the woolcombers. But he obtained that honour, not on account of any improvements he made in the trade, but because he suffered martyrdom by having his flesh torn by carding irons.

MELANCHOLY.—Of the melancholy of common life there are two species that have but little resemblance. There is a sullen gloom which disposes to unkindness and every bad passion; a fretfulness in all the daily and hourly intercourse of familiar life, which, if it weary at last the assiduities of friendship, sees only the neglect which has forced and not the perversity of humour which gave occasion to it, and soon learns to hate, therefore, what it considers as ingratitude and injustice; or which, if friendship be still assiduous as before, sees in these very assiduities, a proof, not of the strength of that affection which has forgotten the acrimony to soothe the supposed uneasiness which gave it rise, but a proof that there has been no offensive acrimony to be forgotten, and persists therefore in every peevish caprice till the domestic tyranny becomes habitual. This melancholy temper, so poisonous to the happiness, not of the individual only, but of all those who are within the circle of its influence, and who feel their misery the more because it may perhaps arise from one whom they strive, and vainly strive to love, is the temper of a vulgar mind. But there is a melancholy of a gentler species, a melancholy which as it arises, in a great measure, from a view of the sufferings of man, disposes to a warmer love of man this sufferer, and which is almost as essential to the finer emotions of virtue as it is to the nicer sensibilities of poetic genius.—DR. THOMAS BROWN.

TRANSLATION OF SOME LINES WRITTEN IN LATIN BY LADY JANE GREY.

ENDLESS all malice if our God is nigh,
Fruitless all pains if He his help deny;
Patient I pass these gloomy hours away,
And wait the morning of eternal day.

IF ever any book was truly poetical,—if ever any abounded with poetry, it is *Paradise Lost*. What an expansion of facts from a small seed of history! What worlds are invented,—what embellishments of nature upon what our senses present us with! Divine things are more nobly, more divinely, represented to the imagination than by any other poem; a more beautiful idea is given of Nature than any poet has pretended to,—Nature—as just come out of the hand of God, in all its virgin loveliness, glory, and purity; and the human race is shown, not, as Homer's, more gigantic, more robust, more valiant, but without comparison more truly amiable, more so than by the pictures and statues of the greatest masters. And all these sublime ideas are conveyed to us in the most effectual and engaging manner. The mind of the reader is tempered and prepared by pleasure: it is drawn and allured, it is awakened and invigorated, to receive such impressions as the poet intended to give it. The poem opens the fountains of knowledge, piety, and virtue; and pours along full streams of peace, comfort, and joy, to such as can penetrate the true sense of the writer, and obediently listen to his song.—RICHARDSON.

CIRCLES are praised, not that abound
In largeness, but th' exactly round;
Such praise they merit, who excel,
Not in wide spheres, but acting well.—?

THE common imagination that we have of Paradise on the other side of death, is, that of a loftly aërial region, where the inmates float in ether, or are mysteriously suspended upon nothing—where all the warm and sensible accompaniments which give such an expression of strength, and life, and colouring, to our present habitation, are attenuated into a sort of spiritual element, that is meagre, and imperceptible, and utterly uninviting to the eye of mortals here below—where every vestige of materialism is done away, and nothing left but certain unearthly scenes that have no power of allurement, and certain unearthly ecstacies, with which it is felt impossible to sympathize. The holders of this imagination forget all the while that really there is no essential connexion between materialism and sin—that the world which we now inhabit, had all the amplitude and solidity of its present materialism before sin entered into it—that God so far, on that account, from looking slightly upon it, after it had received the last touch of his creating hand, reviewed the earth, and the waters, and the firmament, and all the green herbage, with the living creatures, and the man whom He had raised in dominion over them, and He saw everything that He had made, and, behold, it was all very good. They forget that on the birth of materialism, when it stood out in the freshness of those glories which the great Architect of Nature had impressed upon it, that then "the morning stars sung together, and all the sons of God shouted for joy." They forgot the appeals that are made everywhere in the Bible to this material workmanship—and how, from the face of these visible heavens, and the garniture of this earth that we tread upon, the greatness and the goodness of God are reflected on the view of his worshippers. No, my brethren, the object of the administration we sit under, is to extirpate sin, but it is not to sweep away materialism. By the convulsions of the last day, it may be shaken, and broken down from its present arrangements; and thrown into such fitful agitations, as that the whole of its existing framework shall fall to pieces; and with a heat so fervent as to melt its most solid elements, may it be utterly dissolved. And thus may the earth again become without form and void, but without one particle of its substance going into annihilation. Out of the ruins of this second chaos, may another heaven and another earth be made to arise; and a new materialism, with other aspects of magnificence and beauty, emerge from the wreck of this mighty transformation; and the world be peopled as before, with the varieties of material loveliness, and space be again lighted up into a firmament of material splendour.—DR. CHALMERS.

RURAL SPORTS FOR THE MONTHS.

AUGUST.

Now westlin winds, and slaught'ring guns
Bring autumn's pleasant weather;
The moorcock springs, on whirring wings,
Amang the blooming heather.

THE sport which is eagerly anticipated and vigorously pursued by our northern neighbours at this season of the year is grouse shooting. On the extensive moors and dry central mountains of Scotland red grouse especially abound, finding cover and protection from their enemies in the wide-spread carpet of heather, and being concealed from observation by their similarity of colour with that of their place of shelter. The Heath, which is so common in the northern parts of the kingdom that our moors and mountain sides are completely empurpled with its blossoms, is a most valuable plant, and admirably adapted for the situations in which it is found. Multitudes of birds find sustenance in the tender buds and numerous seeds; while to the poor this plant affords a convenient substitute for more expensive fuel. On the slopes and flats where the heath is of considerable length, the red grouse is sure to be abundant, but so difficult is it to raise them from their cover when the season has been unfavourable, and they are not in good feather, that we are told that "one who has little knowledge of the moors may wander for days, in the places where they are most abundant, and not see a single bird."

Scotland is undoubtedly superior to every other part of Great Britain for the breeding and rearing of grouse, yet there are other localities where they are, or have been found. Black grouse were formerly common in the New Forest in Hampshire, and in some parts of Derbyshire, Devonshire, and Staffordshire, but red grouse were more rarely found, and are probably not to be met with in any one of those counties at the present time. The heights and moors of England, especially of the southern parts, are deficient in cover and in food, and are not therefore adapted for the protection of these birds. In Yorkshire they are to be met with in tolerable abundance, but the ravages of the lead miners have greatly lessened their numbers. These men act in concert, and are not easily hindered or restrained from their pursuit. According to Mr. Blaine they go from ten to twenty in a body, marching in a line from forty to sixty yards' distance from each other, and as they are excellent walkers, and usually expert shooters, they destroy a vast number of birds, especially as they generally begin their maraudings before the legal time. They also take other advantages, for certain houses of call are ready to receive the birds and to dispatch them by coach to London, or by horse-loads to the large provincial towns or watering-places on the coast. The system of plunder is therefore complete; and the sporting, as it regards grouse, is in a great measure annihilated.

English grouse shooters usually proceed towards the northern counties from Staffordshire to the Tweed, or from Whitby to Whitehaven, but the poaching propensities of the miners, as above noticed, have left some districts, once abounding in game, now nearly destitute of it. Among the most esteemed localities for this sport we may mention Kirby Lonsdale, Brough, Bowes, Sedbergh, Kirkby Stephen, and the old Spittal. Leaving our readers to seek for information concerning these places in professedly sporting publications, we proceed to notice the grouse shooting of Ireland and Scotland.

The numbers of grouse in Ireland are few when compared with those of England and Scotland. A sportsman tells us that he saw more of them on the mountains about Langholm in Scotland in one day, than he ever saw in Ireland in twenty, although he has visited the best preserved mountains of the latter country. These are on the south side of the great Galty Mountains, near Michells' Town in the counties of Cork, Limerick, and Tipperary, and are considered to be the best for grousing in Ireland. Enveloped by these mountains is a tract of country belonging to the Earl of Kingston, celebrated among others for the abundance of different kinds of game to be found on it, and especially of grouse. The Kerry, Wicklow, Clogheen, Nenagh, and all the north country mountains, are likewise said to have plenty of grouse on them, and to be in general well-preserved.

In the Highlands of Scotland grouse shooting is so eagerly followed, that the lairds are enabled to exact considerable sums from sportsmen by way of rent for their shooting quarters during the season. The distance, and the expenses connected with a journey to the Highlands do not deter a considerable number of persons from undertaking it, for the shooting of red grouse is one of the highest marks of the sportsman's ambition. This sport commences by law on the 12th of August, some days before the shooting of black grouse, and in setting out to the moors, the grouser is careful to provide himself well with all the requisite materials, since the distance of the shooting locality from places where he can be re-supplied is generally great. The safest plan therefore to prevent disappointment is to take duplicates of all the materials. "We rented some grousing grounds," says Blaine, "near Brough in Westmoreland, the ascents to some of which were so precipitous, that we could only make our way up the gullies and water-courses for more than three miles to our point. As we were too enthusiastic in the sport, particularly in the first part of the season, not to be every-day engaged in it, we employed a mule in carrying us up to our ground; and the same plan we would strongly recommend to other sportsmen thus situated; for mules, it is well known, are hardy and remarkably safe."

The heavy mist so frequent in mountainous regions is a great drawback to this sport, it is also of little avail to beat the moors in the heat of the day, so that success in grousing may be considered very precarious. Perhaps it is mainly owing to the risk and uncertainty connected with the sport, that it is so highly esteemed and zealously practised.

The red grouse is exclusively confined to the British Islands, and has never been found on any part of the Continent. It is fifteen inches long, and weighs about nineteen ounces, being a little larger than the ptarmigan, though the difference, except in the length of the wings, is inconsiderable. The bill is black; the eyes hazel; the nostrils shaded with small red and black feathers; at the base of the lower bill there is a white spot on each side; the throat is red; each eye is arched with a large naked spot; the body is beautifully mottled with deep red and black, which gives it the appearance of tortoise-shell; the breast and belly are of a purplish hue, crossed with small dusky lines; the tail consists of sixteen feathers of equal lengths, the four middlemost barred with red, the others black; the quills are dusky; the legs are clothed with soft white feathers down to the claws, which are strong, and of a light colour. The female is somewhat less: the naked skin above each eye is not so conspicuous, and the colours of its plumage, in general, much lighter than those of the male.

The red grouse (*Tetrao Scoticus*) belongs to a sub-genus of the order *Gallinidæ*. It appears to have been unknown to Linnæus, while Gmelin regarded it as a variety of the ptarmigan. The food of this bird consists of mountain and bog-berries, and the young shoots of heath. It has been remarked that in cultivated districts, a great change has taken place in the habits of the grouse, and instead of seeking a precarious subsistence on the moors during severe weather, they migrate towards the lower grounds, where hundreds crowd to the corn-sheaves; and as the grain there remains out a considerable portion of the winter, so they escape starvation even in the worst seasons. The female lays from five to ten eggs early in the spring, in

a rude nest on the ground, and is remarkable for care and attention to her young. She resolutely fights their battles against the birds of prey and the vermin that attack them, nor is the male bird neglectful of his offspring. In order to secure the flight of the *cheepers*, (as young grouse are called,) both parents will practise such manœuvres as may best divert the shooter's attention, so that we find a sportsman saying:—"The very self-devotion which makes the parents so ready a mark, by the lingering flight they make, in order to secure the retreat of their brood, should plead for them, especially when the cheepers are now almost arrived at maturity, and consequently are fit prey for the shooter."

Several instances are recorded of the grouse being reared in a domesticated state. A gentleman, residing at Green Mount, Tipperary, Ireland, is said to have kept two brace of grouse for several years, which were so tame that it was a common practice with their owner to bring the birds and his setters into the parlour together, and divert himself with seeing the dogs set: the birds did not pay the smallest attention to the dogs, or indicate the least wish to escape.

In concluding our notice of the sport for which the present month is distinguished we take the opportunity of expressing our regret that any reader of the *Saturday Magazine* should disapprove of the publication of our accounts of rural sports, on the ground that some of the incidents are calculated to justify and encourage cruel and unfeeling pursuits. The description of the several sports practised throughout our country is a mere description of *facts*, employed in this instance as a vehicle for conveying information respecting the animals pursued, and the localities which they inhabit. This was distinctly stated in our opening remarks, (to which we beg to refer our readers, Vol. XVIII., p. 38,) and we are not conscious of having departed from the plan originally laid down. In the description of the angler's sport, we have used the term "fascinating," in a way which, though it has excited the objections of a correspondent, we know to be strictly true. The artist and the admirer of nature have expatiated with delight on the scenes which in their days of angling they were led to explore, and which, but for that amusement, they might never have beheld. We perfectly agree with our correspondent, in his remark that such advantages as these may be attained by other and more rational means. In the article in question, while we have given the opinion of the honest Izaak Walton, to show what a person of mild and amiable disposition can say in defence of this sport, we have also given the satirical remarks of Sir Walter Scott, directed at such as would endeavour to prove that fishes are possessed of a very low degree of sensibility to pain.

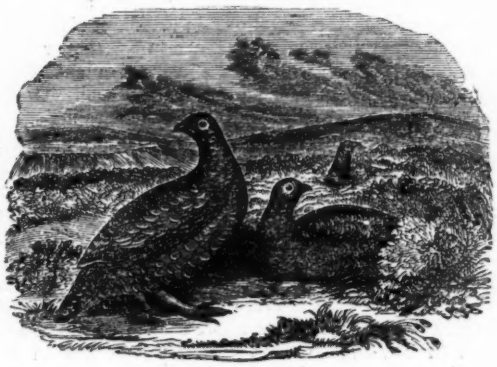
For ourselves, we see but immaterial shades of difference, as far as it regards *cruelty*, in the several sports which have for their object the extinction of animal life, and we can therefore fully adopt the language of our favourite poet, when he says with respect to animals:—

. . . . . If man's convenience, health,
Or safety interfere, his rights and claims
Are paramount, and must extinguish theirs.
Else they are all—the meanest things that are,—
As free to live, and to enjoy that life,
As God was free to form them at the first,
Who in His sovereign wisdom made them all.

COWPER.

TRUE, 'twas of old by God decreed
That birds for man's support may bleed,
His words to Noah: not so plain
The license which those words contain,
Nor know I well what records hold
The license, in what court enrolled,
To cut their lives for *pastime* short,
Or of their sufferings make our *sport*.
But most accordant to his word
I deem it, that the needful bird
Or beast should fall by those who smite
For business, rather than delight.
And surely most it bears the sign
And likeness of the stamp divine;
And sure 'tis most from semblance free
And blame of wanton cruelty;
And most accordant to the part
Which suits the meek and feeling heart;
Whom duty leads not on, that they
Should turn from deeds of blood away,
Nor on their victims' sufferings pore,
Nor bathe unbid their hands in gore.
HIM, who is merciful and kind
To all his works, the thoughtful mind
Most seeks by kindness to express:
And "gentle heart loves gentleness*."

MANT'S *British Months*.



RED GROUSE. *Tetrao Scoticus.*

* Chaucer.

I CAN conceive no office more noble than that of a Christian minister. The triumphs of successful legislation may adorn the statesmen—the laurels of conquest may wreathe proudly round the brow of the victor—but the Christian minister may boast of acquisitions more important than the one and more permanent than the other. He may be buried in an obscure and impoverished parish—his circle may be narrow—his enjoyments few—his relaxations sparing—but his name will be precious to those whom he has comforted in affliction, soothed in suffering, and cheered in death.—Nor is this all;—his memory will ever be a ffectionately cherished by those who reverence in him the instrument of their eternal salvation.—ANONYMOUS.

BOOKS are the legacies that genius leaves to mankind, to be delivered down from generation to generation, as presents to the posterity of those who are yet unborn.—ADDISON.

ROUGH uncultivated ground, dismal to the eye, inspires peevishness and discontent: may not this be one cause of the harsh manners of savages?

A field richly ornamented, containing beautiful objects of various kinds, displays in full lustre the goodness of the Deity, and the ample provision He has made for our happiness. Ought not the spectator to be filled with gratitude to his Maker, and with benevolence to his fellow-creatures? Other fine arts may be perverted to excite irregular, and even vicious, emotions; but gardening, which inspires the purest and most refined pleasures, cannot fail to promote every good affection. The gaiety and harmony of mind it produces, inclining the spectator to communicate his satisfaction to others, and to make them happy as he is himself, tend naturally to establish in him a habit of humanity and benevolence.—LORD KAIMES.

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